

KEPLER OBSERVATIONS OF AN ULTRACOOL L DWARF

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We propose to monitor a nearby (17 pc) L dwarf to obtain a year-long time series. The Kepler data, together with supporting multiwavelength observations, will provide a unique dataset to probe the atmospheric properties of dusty brown dwarfs. Both magnetic starspots and clouds are believed to be possible sources of variability in ultracool dwarfs. We will constrain and model the spot/cloud properties and compare to properties of hotter (M dwarf) stars. We will also search for flares, which are believed to be common in L dwarfs even with quiescent chromospheres.